



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/516,544

12/02/2004

Fumihiko Yamaguchi

Q85085

5112

23373 7590 04/05/2007  
SUGHRUE MION, PLLC  
2100 PENNSYLVANIA AVENUE, N.W.  
SUITE 800  
WASHINGTON, DC 20037

EXAMINER

HU, HENRY S

ART UNIT

PAPER NUMBER

1713

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
--	-----------	---------------

31 DAYS

04/05/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

4

<b>Office Action Summary</b>	<b>Application No.</b> 10/516,544	<b>Applicant(s)</b> YAMAGUCHI ET AL.	
	<b>Examiner</b> Henry S. Hu	<b>Art Unit</b> 1713	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 1 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on Pre-Amendment of December 2, 2004.
- 2a) ☐ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☐ Claim(s) \_\_\_\_\_ is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☒ Claim(s) 1-22 are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>2 pages</u> . | 6) <input type="checkbox"/> Other: _____  |

Art Unit: 1713

1. USPTO has received a total of **two IDS'** filed on January 3, 2005 (1 page) and December 20, 2004 (1 page) respectively. USPTO has also received **Pre-Amendment** filed on December 2, 2004. **Claims 10-11, 14 and 17-20 were amended, while no claim was cancelled or added.** To be specific, the claim amendment on Claims 10-11, 14 and 17-20 was only to remove improper multiple dependency. **Claims 1-22** with only one independent claim (**Claim 1**) are pending now. An action follows.

#### **DETAILED ACTION**

##### ***Election/Restrictions***

2. Restriction is required under 35 U.S.C. 121 and 372.

This application contains the following inventions or groups of inventions, which are not so linked as to form a single general inventive concept under PCT Rule 13.1, this is based on the preliminary search done by the examiner.

In accordance with 37 CFR 1.499, applicant is required, in reply to this action, to elect a single invention to which the claims must be restricted as following:

I. **Claims 1-9, drawn to a fluorine-containing copolymer comprising four monomers having formula (I), (II), (III) and (IV) with its respective amount as specified.**

II. Claims 10-14, drawn to a method for using a copolymer of Group I for treating a specific solid substrate, particularly paper and cardboard to impart lipophobic property and hydrophobic property.

III. Claims 15-22, drawn to a process for preparing a copolymer of Group I in a specific solvent or solvent mixture. The process comprises copolymerizing the monomers (a), (b), (c) and (d) in a water-soluble organic solvent or a solution of a mixture of water-soluble organic solvents and an inorganic or organic acid.

3. The inventions are distinct, each from the others because of the following reasons:

**Inventions I, II and III are all unrelated.** Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have different modes of operation, different same functions, or different effects (MPEP § 806.04, MPEP § 808.01). Although the same mixture of four specified monomers (a) – (d) may be involved in all three inventions, they are actually three quite different subject matters such as polymer, method of making and process of using. In a very close examination, the process of making or using is unique and thereby not interchangeable.

4. In the instant case **Group I** was drawn to a fluorine-containing copolymer comprising four monomers, **Group II** was drawn to a method for using a copolymer of Group I for

Art Unit: 1713

treating a specific solid substrate, while **Group III** was drawn to a process for preparing a copolymer of Group I in a specific solvent or solvent mixture. Therefore, the scope of the claims, i.e., the metes and boundaries are distinct.

5. In other close examination, the process of using in Group II involves the specific use as a paper treatment agent. In the instant case the process as claimed can be used for other purpose other than paper treatment. For instance, it can be used as a additive or as a binder polymer. Same rationale can be applied to Group III, the process of making. Therefore, the scope of the claims, i.e., the metes and boundaries are distinct. Should applicant traverse on the ground that the species are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the species to be obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the inventions anticipated by the prior art, the evidence or admission may be used in a rejection under 35 U.S.C. 103(a) of the other invention.

6. Where the group of inventions is claimed in one and the same international application, the requirement for unity of invention referred to in Rule 13.1 shall be fulfilled only when there is a technical relationship among those inventions involving one or more of the same or corresponding special technical features. The expression “**special technical features**” shall mean those technical features that define a contribution which each of the claimed inventions considered as a whole, makes over the prior art. The inventions listed as Groups I and II do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule

Art Unit: 1713

13.2, although they share the special technical feature, this special technical feature does not define a contribution over the prior art for the following reasons:

**Claims 1-22 may be either obvious or anticipated by following JP 55-069677 to Taskao et al., JP 6-122,870 (or its equivalent US 4,366,299 or EP 34,527 A1) to Dessaint and EP 787,855 to Jean-Marc et al. as well as from other cited references in Applicants' two IDS'**, each individually or in combination. In summary, these methods have no common features in the preparation as well as its application since **they are related to a product or different methods**. The scope of the claims, i.e., the metes and boundaries are distinct. Accordingly, the special technical feature linking the inventions does not provide a contribution over the prior art, and no single general inventive concept exists. Therefore the restriction is appropriate

7. Because these inventions are distinct for the reasons given above shown as different subject matters and the search required for each group is not required for other groups have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.

8. A telephone call was made to **Abraham J. Rosner (reg. # 33,276, tel: 202 293-7060)** on the date of October 20, 2006 or earlier to request an oral election to the above restriction requirement, but did not result in an election being made. Applicant is advised that the reply to

Art Unit: 1713

this requirement to be complete must include an election of the invention to be examined even though the requirement be traversed (37 CFR 1.143).

9. Applicant is advised that the reply to this requirement to be complete must include an election of the invention to be examined even though the requirement be traversed (37 CFR 1.143).

10. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

### ***Conclusion***

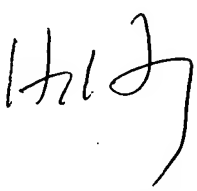
11. Any inquiry concerning this communication or earlier communication from the examiner should be directed to **Dr. Henry S. Hu** whose telephone number is **(571) 272-1103**. The examiner can be reached on Monday through Friday from 9:00 AM –5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wu, can be reached on (571) 272-1114. The fax number for the organization

Art Unit: 1713

where this application or proceeding is assigned is (571) 273-8300 for all regular communications.

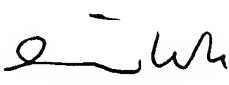
Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Henry S. Hu

Patent Examiner, Art Unit 1713, USPTO

April 1, 2007



DAVID W. WU  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 1700